WINDOW 6 and THERM 6 Release Notes

These release notes apply to WINDOW 6 Research Version (6.0.30) and THERM 6 Research Version (6.0.02).

WINDOW 6 and THERM 6 are significant updates to LBNL's WINDOW 5 and THERM 5 because of the added capability to model complex glazing systems, such as windows with shading systms, in particular venetian blinds.

The algorithms used in the Research Versions of WINDOW 6 and THERM 6 to determine the properties of windows with shading layers are relatively new and should be considered as informative but not definitive. As such, for windows with shading layers, the results are intended for research purposes only. Pending further validation efforts, results for windows with shading layers should not be used for National Fenestration Rating Council (NFRC) certified calculations or design decisions in real buildings. All calculations for products without shading layers are identical to those from WINDOW 5.2 and THERM 5.2.

Changes from WINDOW 6 Research Version (6.0.28)

Preferences – Venetian Blind Calculation Methods

In File/Preferences, the default values for the Venetian Blind Calculation Methods have changed. In the previous version, it was set to Uniform Diffuse for both the Solar/Visible range and the FIR range. In this version, the default is set to Directional Diffuse, which was not implemented in the previous version and which is a more accurate calculation method.

Venetian Blind Coordinate System

Fixed the order in which the venetian blind data gets passed to WINDOW 6. This doesn't change hemispherical values, but does change angular output to the correct values

Documentation

Documentation of the .csv file (created by WINDOW 6 for the MatrixReader.xls spreadsheet) is added to the technical documentation appendix

Basis Modifications

Modifications were made to the quarter and half basis XML files in order to fix some bands where the mid-point was not correctly defined

General Information

Documentation:

The documentation for both WINDOW 6 and THERM 6 is contained in one file, called "WINDOW6-THERM6ResearchDoc.pdf". It is included in the WINDOW 6 installation (but not in the THERM 6 installation, just to keep the THERM 6 installation small). This document can also be downloaded from the either the THERM 6 or WINDOW 6 websites: http://windows.lbl.gov/software/window/6/ or http://windows.lbl.gov/software/therm/6/ and clicking on the Documentation link.

DOE2 and Energy Plus Files:

The WINDOW 6 Research Version does not currently create files for DOE2 or EnergyPlus for windows with complex glazing systems. This will be a feature added in future releases.

Venetian blind distances:

For Venetian blinds, the cross section types should use the following settings:

- Sill – Dbot
- Head – Dtop
- Jamb – Average of Dleft and Dright

XML Files:

The program assumes that the XML file is using the full WINDOW6 basis – currently the program does not read the header of the XML file which might define another basis.

At this point in time, WINDOW 6 does not read spectral data from the BSDF XML file – the program assumes that the first set of data are values for the visible band and the second set of data are values for the near IR band.

Contact LBNL if you would like to use this featuer for more details about how to use this feature.

Matrix Reader:

The documentation talks about the "Matrix Reader" which is an Excel spreadsheet used to view the detailed angular results of the matrix method calculation. This version of WINDOW 6 comes with "W6MatrixReader v6.0.0.xls" which is an updated version of the matrix reader (from the versions that accompanied Beta versions of WINDOW 6). Make sure that you are using the version 1.1 spreadsheet with this release of WINDOW 6.